

3.5.2 Data Analysis

Cyclists tend to prefer roadways with relatively low motor vehicle traffic volumes and speeds. Regular bicycle commuters are probably the least likely to be deterred from using more heavily traveled routes, especially if they are the most direct. However, even most experienced cyclists are likely to choose quieter, less traveled routes when given the choice.

For this reason, average daily trips (ADTs) and posted speed limits were mapped and analyzed in relation to reported bicycle collisions in Chula Vista over the last five years. (See Figures 10-12: Average Daily Trips, Speed Limits and Bicycle Related Collisions.)

The number of collisions has been relatively stable over the last five years with no particular pattern in the time of year. There was an increase in collisions in 2007 and 2008, but the number decreased in 2009. There have been no fatalities in that period. Showing collisions as a statistic per rider more accurately illustrates safety increases or decreases. In addition, noting the miles of additional bicycle facilities being added each year and comparing those to the metric of collisions per rider can also illustrate any correlation between increased safety and increased bicycle facilities. Note that while these numbers may correlate, total causation can not be assumed. There are many other important factors affecting bicycle and roadway safety. Broadway, for example, the roadway with the most reported collisions, does not have a bicycle facility.

There appears to be an increase in collisions on Tuesdays and Wednesdays, which is interesting to note since there is likely to be a division of types of cyclists especially between recreational riders on weekends and commuting cyclists on weekdays. It is possible that, for some reason, commuting cyclists in Chula Vista are at more risk of collision.

Reviewing the crash and citation data revealed an apparent need for cyclist education. Of special note was that more than half of the cyclist citations (22 of 38) were written for wrong-way riding, which is a significant cause of motor vehicle-bicycle collisions. Facility design can mitigate some of the more common crash types. For example, typical bicycle lane design includes an arrow pointing in the correct direction of travel and a bicycle box can increase a cyclist's visibility at intersections, which can help to prevent conflicts with turning motor vehicles.

3.5.3 Public Meetings

Two public meetings were held at locations in the eastern and western sides of the City. All the analysis graphics used in this plan were displayed on boards around the room and very large aerial maps of the City were placed on tables. The consultant gave a short orientation presentation addressing why the City was conducting the workshops and master plan update and the results of their initial analysis. Attendees were then asked to put written comments on any of the graphics, but to pay particular attention to the



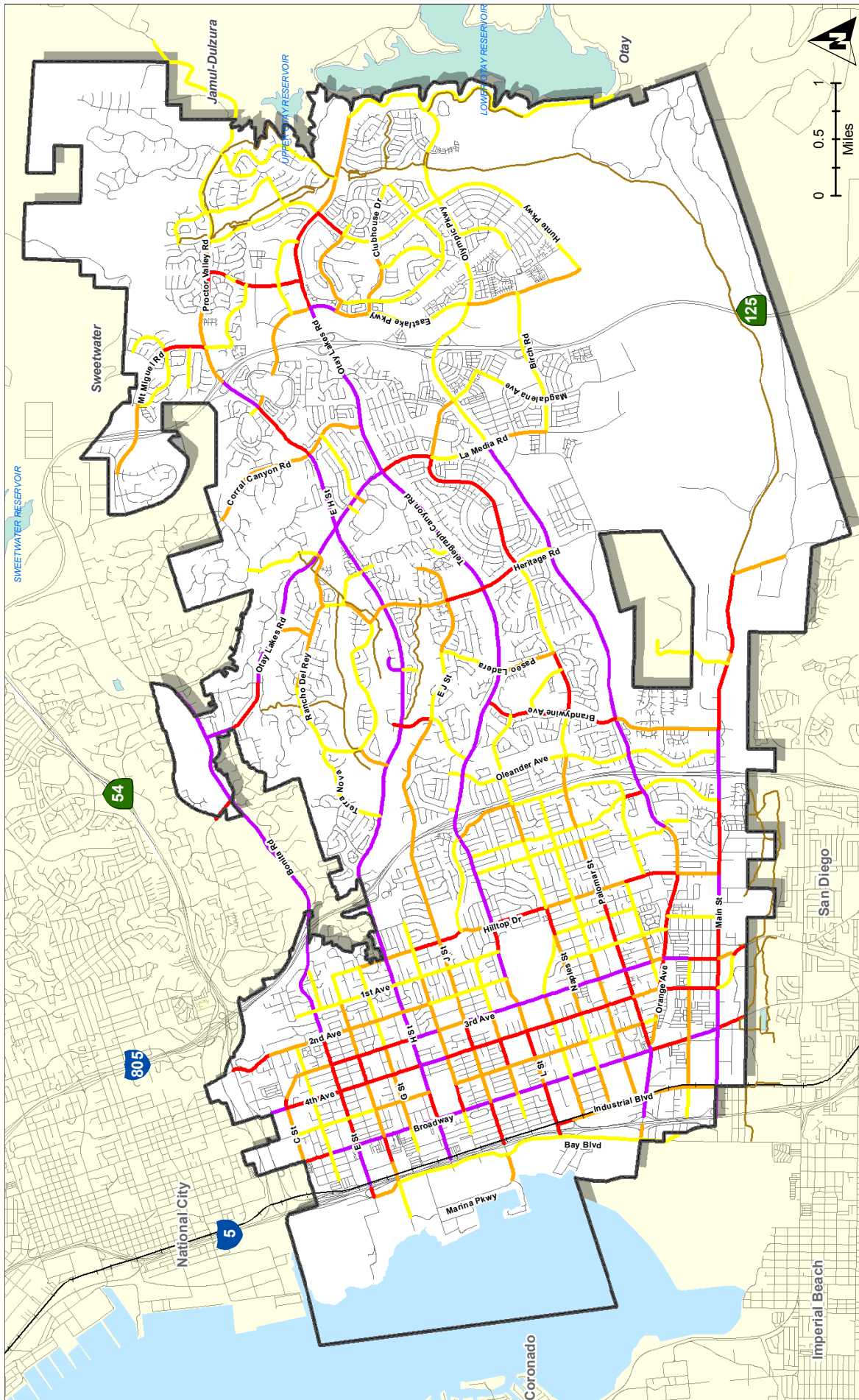


Figure 10: Average Daily Trips (ADT)

- Traffic Volumes***
- < 5,000
 - 5,000 - 10,000
 - 10,000 - 20,000
 - > 20,000
- City of Chula Vista
— Trails
— Railroad
— Lakes

* Source: City of Chula Vista 2010

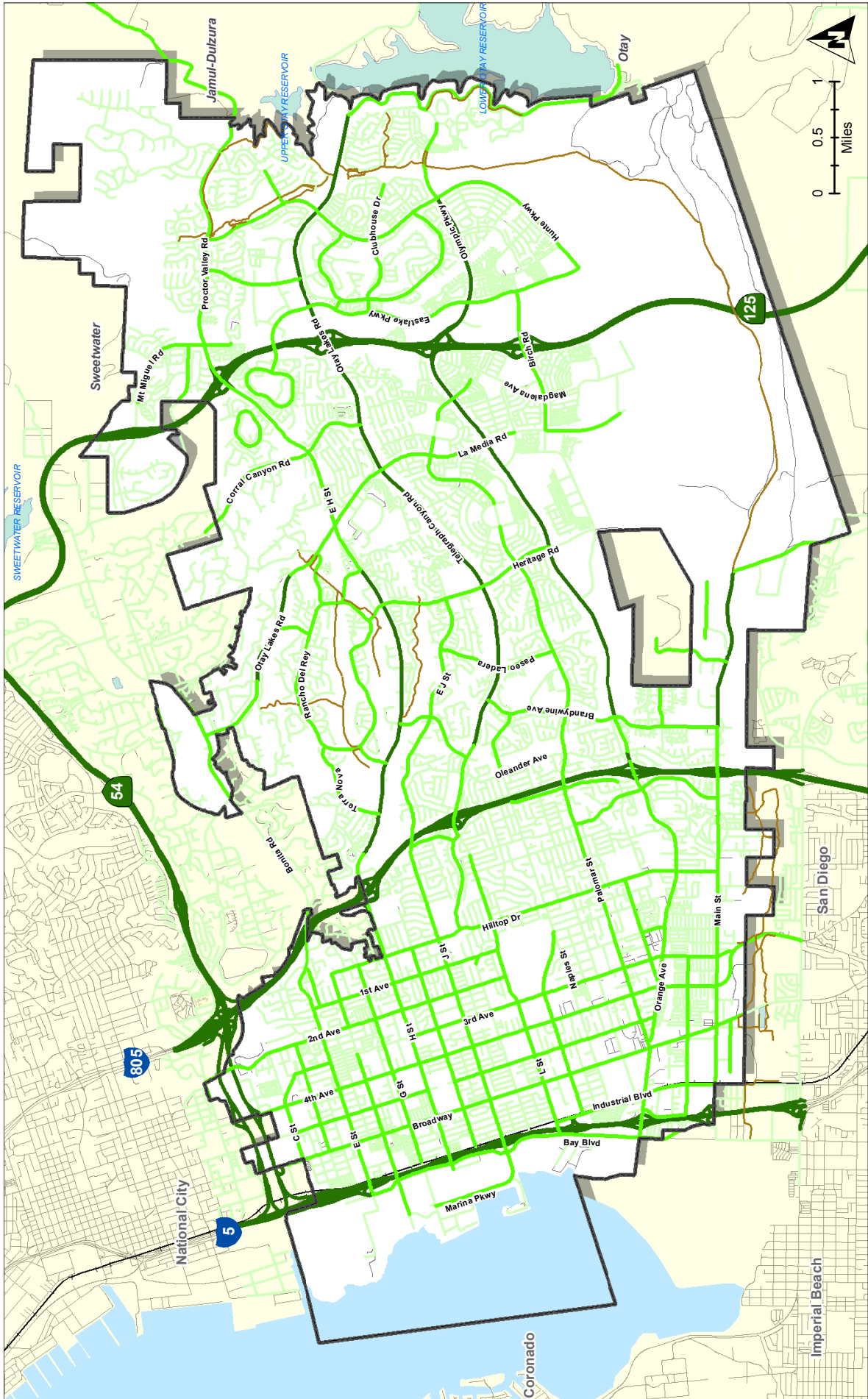


Figure 11: Speed Limits

* Source: City of Chula Vista 2010

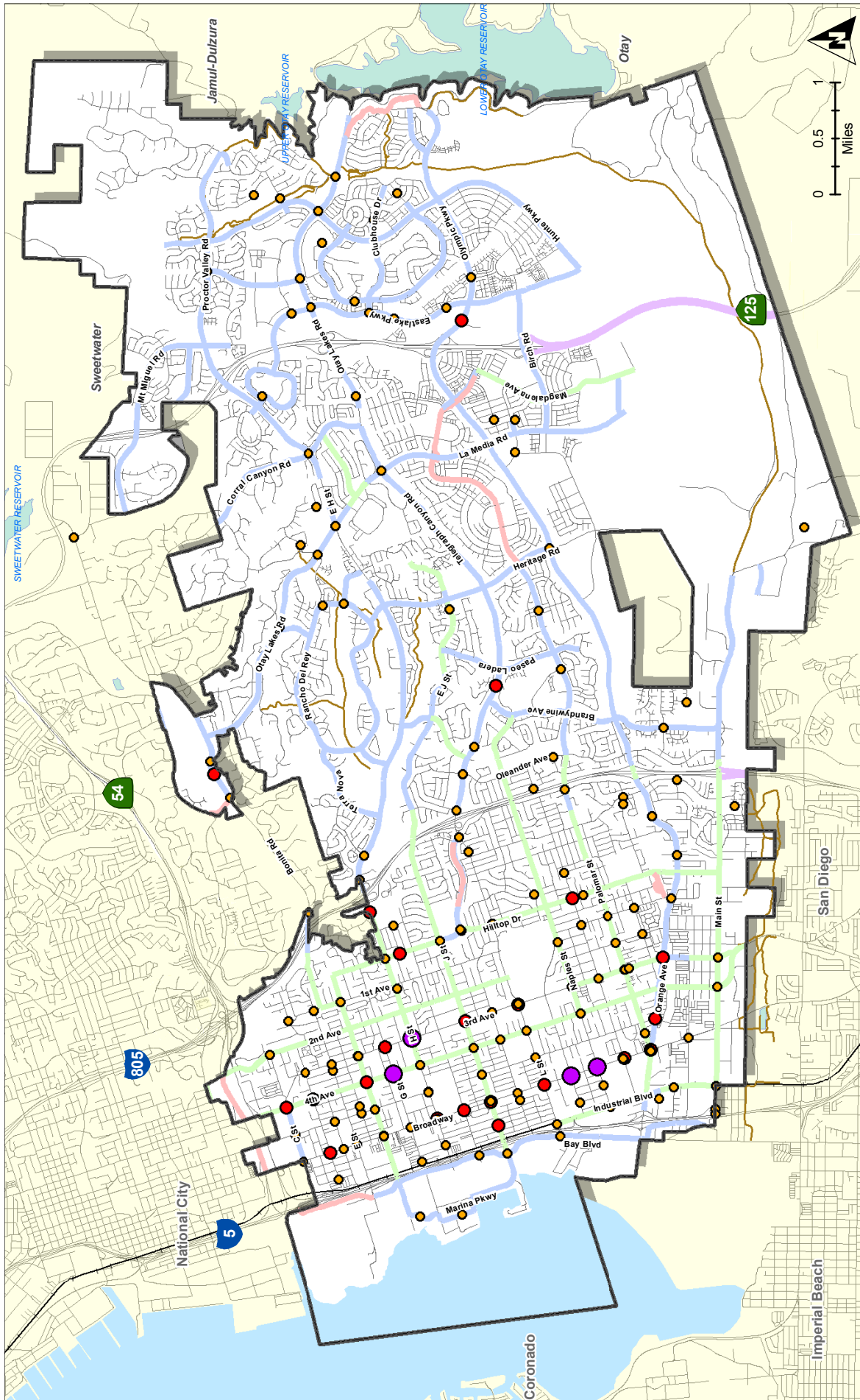


Figure 12: Bicycle Related Collisions

- City of Chula Vista
- Trails
- Railroad
- Lakes
- Bicycle Related Collisions (2005-2009)****
- Number of Collisions**
 - 1
 - 2
 - 3
- Existing Bicycle Facilities***
 - Class 1: Bike Path
 - Class 2: Bike Lanes
 - Class 3: Bike Route
 - Freeway Shoulder

* Source: KTU+A 2010
 ** Source: City of Chula Vista 2010

Table 5: Bicycle Related Collisions by Year

Year	2005	2006	2007	2008	2009	Totals
Number of Collisions	36	32	44	57	37	206
Number of injuries	35	30	43	52	37	197
Number of fatalities	0	0	0	0	0	0

Source: City of Chula Vista Bicycle Collisions Data (2005-2009)

Table 6: Bicycle Related Collisions by Month

Months	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Totals
Total collisions	18	18	9	16	12	23	17	20	20	19	18	16	206
Number of injuries	18	18	9	15	11	21	16	18	19	18	17	17	197
Number of fatalities	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: City of Chula Vista Bicycle Collisions Data (2005-2009)

Table 7: Bicycle Related Collisions by Time of Day

Time of Day	5-7am	7-9am	9-11am	11-1pm	1-3pm	3-5pm	5-7pm	7-9pm	9-11pm	Totals
Number of Collisions	2	21	13	25	40	48	40	15	2	206
Number of injuries	2	19	14	22	38	47	39	14	2	197
Number of fatalities	0	0	0	0	0	0	0	0	0	0

Source: City of Chula Vista Bicycle Collisions Data (2005-2009)

Table 8: Bicycle Related Collisions by Day of Week

Day of the Week	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Totals
Total Collisions	23	38	42	22	29	30	22	206
Number of injuries	23	38	41	20	27	26	22	197
Number of fatalities	0	0	0	0	0	0	0	0

Source: City of Chula Vista Bicycle Collisions Data (2005-2009)

Table 9: Bicycle Related Citations

Violation	Total Violations	At Fault			
		Driver	Bicycle	Both	Unknown
Bicycle going wrong way	20		20		0
Bicycle violation	21		2		19
Failure to yield to pedestrians in crosswalk	7	1			6
Follow too closely	1				1
Misc. non-hazardous violation	9	1		1	7
Pedestrian disobey signal/sign	3				3
Private property/or late report	13	1	2		10
Red light violation	17	1	1		15
Riding bike while intoxicated	3		2		1
Right of way violation	53	1	6	2	44
Stop Sign	7				7
Stopping, standing, parking violation	6	2			4
Traffic sign, signal, marking violation	2	1			1
Turning, stopping, turn signal violation	30	4	1		25
Unsafe Speed	12	1	2		9
Wrong side of roadway	2		2		0
Totals	206	13	38	3	152

Source: City of Chula Vista Bicycle Collisions Data (2005-2009)

large table maps. These maps were purposely plotted at such a large scale that attendees could visually locate on them anything in the City one foot across or greater. In addition to comments about specific location issues, attendees were also asked to mark directly on the maps where they currently ride, where they would like to ride and where they would like to see new bicycle facilities.

The comments placed on the aerial photo maps included policy requests such as better enforcement of cell and text messaging laws while driving and obeying posted speed limits, education for both motorists and cyclists, ordinances requiring provision of bicycle parking, performing bike and walk audits around schools, and control of service vehicle parking in bike lanes.

Some site-specific requests included improved freeway crossings including LED warning lights to alert motorists to the presence of cyclists, a shared use path or “greenway” on East Palomar Street, traffic calming measures on hilly streets, reduced speed limits on H Street, “road diets” on H Street and Broadway, sequencing traffic signals on Broadway at 12 mph to benefit cyclists, and adding more bike parking, especially downtown.

In addition to the two public meetings, meetings were also held with the City of Chula Vista’s Safety Commission and the downtown business district association known as the Third Avenue Village Association (TAVA).

On July 16, 2010, TAVA was presented with the proposed Bikeway Master Plan and shown how it is consistent with the Chula Vista Urban Core Specific Plan adopted by Council in late 2005. The focus of the meeting was on Third Avenue, which is shown as a Class 3 bike route. TAVA supported a Class 3 bike route facility at this time due to impending street improvements expected in 2011 between F and H Streets. TAVA also made a recommendation to support a Class 3 bike route on Third Avenue between C and J Streets.

Regarding future changes to bike facilities and on-street parking, TAVA first wanted to see how the proposed street improvement project would impact the central business district. Therefore, potential additional improvements such as the addition of Class 2 bike lanes and reverse angle parking to make it easier for exiting motorists to see oncoming cyclists and vehicles, could be considered as part of the next Bikeway Master Plan update in 2015/2016.

On October 6, 2010, City staff presented the draft Bikeway Master Plan Update to the Safety Commission. The Safety Commission voted to accept the staff report and recommend adoption of the Bikeway Master Plan Update by City Council.

3.5.4 On-line Survey Responses and Analysis

An on-line questionnaire was developed based on previous bikeway project experience, but was also customized for this project with the help of City staff. It included informational and attitudinal questions intended to reveal as



much as possible about current user numbers, user types, preferred facility types and times of use. Respondents were also asked to note any specific concerns in a concluding comment section. As hoped, the response rate spiked after the first public meeting and the survey continued to garner responses for weeks afterward.

By the time the master plan was in draft form, 136 people had taken the survey and all found the survey via the City website. There were no responses to the Spanish language version.

More than half of the respondents (62 percent) reported riding for transportation, a relatively high level. Most of them biked two to three days a week on weekday mornings and evenings. When asked about commuting to work, half said they did, but less than five percent did so daily. However of those that did commute, more than half rode more than 10 miles.

Not surprisingly, almost all respondents rode their bikes for recreation and most did so two to three days a week on weekends. Almost 70 percent said they rode with their family, primarily on weekends.

When asked what factors discouraged them from cycling, the three most frequently chosen issues were “motorists that do not follow the rules of the road,” “aggressive motorists that make riding unsafe” and “bicycle unfriendly roadways.”

When asked how certain improvements would affect their decision to cycling more, the improvements that garnered more than 70 percent in high level responses were “bike paths separated from the road and from busy traffic,” “provide more bike lanes painted on safe streets,” “increase maintenance along routes, removing potholes and debris,” and “fix bike unfriendly intersections that have high speed merge lanes.”

Finally, a series of questions addressing children getting to and from school showed that 20 percent of respondents had children who walked or biked to school, and they were exactly split by mode. The two highest responses when asked what prevented their children from walking or biking to school were “concern over safety at street crossings” at 54 percent and “concern over criminal activities” at 35 percent.

In the comments section, many survey respondents reported that while they may ride for recreation and occasional commuting, some would prefer more separated bike paths and many asked for increased street maintenance including surfacing and debris sweeping. Some said they had actually stopped commuting due to roadway conditions. The most common concerns mentioned in the comments were about bicycle unfriendly intersections, unsafe freeway crossings and aggressive and inattentive motorists.

Full survey results and comments text from both the surveys and public workshop maps are included in Appendix G.